

SEQUENCE LISTING

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Shur, Barry A.

<120> METHODS AND COMPOSITIONS FOR MODULATING GAMETE ADHESION

<130> 50508-2390

<150> US 60/512,174  
<151> 2003-10-17

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<170> PatentIn version 3.3

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<212> DNA  
<213> Mus musculus

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 <213> mus musculus

<400> 2

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														10	15

Ala	Ser	Gly	Leu	Phe	Ala	Ala	Ser	Gly	Asp	Phe	Cys	Asp	Ser	Ser	Leu
													20	25	30

Cys	Leu	Asn	Gly	Gly	Thr	Cys	Leu	Thr	Gly	Gln	Asp	Asn	Asp	Ile	Tyr
													35	40	45

Cys	Leu	Cys	Pro	Glu	Gly	Phe	Thr	Gly	Leu	Val	Cys	Asn	Glu	Thr	Glu
													50	55	60

Arg	Gly	Pro	Cys	Ser	Pro	Asn	Pro	Cys	Tyr	Asn	Asp	Ala	Lys	Cys	Leu	
													65	70	75	80

Val	Thr	Leu	Asp	Thr	Gln	Arg	Gly	Asp	Ile	Phe	Thr	Glu	Tyr	Ile	Cys
													85	90	95

Gln Cys Pro Val Gly Tyr Ser Gly Ile His Cys Glu Thr Gly Cys Ser

100

105

110

Thr Gln Leu Gly Met Glu Gly Gly Ala Ile Ala Asp Ser Gln Ile Ser  
115 120 125

Ala Ser Ser Val Tyr Met Gly Phe Met Gly Leu Gln Arg Trp Gly Pro  
130 135 140

Glu Leu Ala Arg Leu Tyr Arg Thr Gly Ile Val Asn Ala Trp Thr Ala  
145 150 155 160

Ser Asn Tyr Asp Ser Lys Pro Trp Ile Gln Val Asn Leu Leu Arg Lys  
165 170 175

Met Arg Val Ser Gly Val Met Thr Gln Gly Ala Ser Arg Ala Gly Arg  
180 185 190

Ala Glu Tyr Leu Lys Thr Phe Lys Val Ala Tyr Ser Leu Asp Gly Arg  
195 200 205

Lys Phe Glu Phe Ile Gln Asp Glu Ser Gly Gly Asp Lys Glu Phe Leu  
210 215 220

Gly Asn Leu Asp Asn Asn Ser Leu Lys Val Asn Met Phe Asn Pro Thr  
225 230 235 240

Leu Glu Ala Gln Tyr Ile Arg Leu Tyr Pro Val Ser Cys His Arg Gly  
245 250 255

Cys Thr Leu Arg Phe Glu Leu Leu Gly Cys Glu Leu His Gly Cys Ser  
260 265 270

Glu Pro Leu Gly Leu Lys Asn Asn Thr Ile Pro Asp Ser Gln Met Ser  
275 280 285

Ala Ser Ser Ser Tyr Lys Thr Trp Asn Leu Arg Ala Phe Gly Trp Tyr  
290 295 300

Pro His Leu Gly Arg Leu Asp Asn Gln Gly Lys Ile Asn Ala Trp Thr  
305 310 315 320

Ala Gln Ser Asn Ser Ala Lys Glu Trp Leu Gln Val Asp Leu Gly Thr  
325 330 335

Gln Arg Gln Val Thr Gly Ile Ile Thr Gln Gly Ala Arg Asp Phe Gly  
340 345 350

His Ile Gln Tyr Val Ala Ser Tyr Lys Val Ala His Ser Asp Asp Gly  
355 360 365

Val Gln Trp Thr Val Tyr Glu Glu Gln Gly Ser Ser Lys Val Phe Gln  
370 375 380

Gly Asn Leu Asp Asn Asn Ser His Lys Lys Asn Ile Phe Glu Lys Pro  
385 390 395 400

Phe Met Ala Arg Tyr Val Arg Val Leu Pro Val Ser Trp His Asn Arg  
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Ile Thr Leu Arg Leu Glu Leu Leu Gly Cys  
420 425

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<212> PRT  
<213> mus musculus

<400> 3

Ala Ser Gly Asp Phe Cys Asp Ser Ser Leu Cys Leu Asn Gly Gly Thr  
1 5 10 15

Cys Leu Thr Gly Gln Asp Asn Asp Ile Tyr Cys Leu Cys Pro Glu Gly  
20 25 30

Phe Thr Gly Leu Val Cys Asn Glu Thr Glu Arg Gly Pro Cys Ser Pro  
35 40 45

Asn Pro Cys Tyr Asn Asp Ala Lys Cys Leu Val Thr Leu Asp Thr Gln  
50 55 60

Arg Gly Asp Ile Phe Thr Glu Tyr Ile Cys Gln Cys Pro Val Gly Tyr  
65 70 75 80

Ser Gly Ile His Cys Glu Thr Gly Cys Ser Thr Gln Leu Gly Met Glu  
85 90 95

Gly Gly Ala Ile Ala Asp Ser Gln Ile Ser Ala Ser Ser Val Tyr Met  
100 105 110

Gly Phe Met Gly Leu Gln Arg Trp Gly Pro Glu Leu Ala Arg Leu Tyr  
115 120 125

Arg Thr Gly Ile Val Asn Ala Trp Thr Ala Ser Asn Tyr Asp Ser Lys  
130 135 140

Pro Trp Ile Gln Val Asn Leu Leu Arg Lys Met Arg Val Ser Gly Val  
145 150 155 160

Met Thr Gln Gly Ala Ser Arg Ala Gly Arg Ala Glu Tyr Leu Lys Thr  
165 170 175

Phe Lys Val Ala Tyr Ser Leu Asp Gly Arg Lys Phe Glu Phe Ile Gln  
180 185 190

Asp Glu Ser Gly Gly Asp Lys Glu Phe Leu Gly Asn Leu Asp Asn Asn  
195 200 205

Ser Leu Lys Val Asn Met Phe Asn Pro Thr Leu Glu Ala Gln Tyr Ile  
210 215 220

Arg Leu Tyr Pro Val Ser Cys His Arg Gly Cys Thr Leu Arg Phe Glu  
225 230 235 240

Leu Leu Gly Cys Glu Leu His Gly Cys Ser Glu Pro Leu Gly Leu Lys  
245 250 255

Asn Asn Thr Ile Pro Asp Ser Gln Met Ser Ala Ser Ser Ser Tyr Lys  
260 265 270

Thr Trp Asn Leu Arg Ala Phe Gly Trp Tyr Pro His Leu Gly Arg Leu  
275 280 285

Asp Asn Gln Gly Lys Ile Asn Ala Trp Thr Ala Gln Ser Asn Ser Ala  
290 295 300

Lys Glu Trp Leu Gln Val Asp Leu Gly Thr Gln Arg Gln Val Thr Gly  
305 310 315 320

Ile Ile Thr Gln Gly Ala Arg Asp Phe Gly His Ile Gln Tyr Val Ala  
325 330 335

Ser Tyr Lys Val Ala His Ser Asp Asp Gly Val Gln Trp Thr Val Tyr  
340 345 350

Glu Glu Gln Gly Ser Ser Lys Val Phe Gln Gly Asn Leu Asp Asn Asn  
355 360 365

Ser His Lys Lys Asn Ile Phe Glu Lys Pro Phe Met Ala Arg Tyr Val

370

375

380

Arg Val Leu Pro Val Ser Trp His Asn Arg Ile Thr Leu Arg Leu Glu		
385	390	395
		400

Leu Leu Gly Cys

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<212> PRT  
<213> artificial

<220>  
<223> EEC - recombinant protein  
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Ala Ser Gly Asp Phe Cys Asp Ser Ser Leu Cys Leu Asn Gly Gly Thr			
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Cys Leu Thr Gly Gln Asp Asn Asp Ile Tyr Cys Leu Cys Pro Glu Gly			
20	25	30	

Phe Thr Gly Leu Val Cys Asn Glu Thr Glu Arg Gly Pro Cys Ser Pro			
35	40	45	

Asn Pro Cys Tyr Asn Asp Ala Lys Cys Leu Val Thr Leu Asp Thr Gln			
50	55	60	

Arg Gly Asp Ile Phe Thr Glu Tyr Ile Cys Gln Cys Pro Val Gly Tyr			
65	70	75	80

Ser Gly Ile His Cys Glu Thr Gly Cys Ser Thr Gln Leu Gly Met Glu			
85	90	95	

Gly Gly Ala Ile Ala Asp Ser Gln Ile Ser Ala Ser Ser Val Tyr Met			
100	105	110	

Gly Phe Met Gly Leu Gln Arg Trp Gly Pro Glu Leu Ala Arg Leu Tyr			
115	120	125	

Arg Thr Gly Ile Val Asn Ala Trp Thr Ala Ser Asn Tyr Asp Ser Lys			
130	135	140	

Pro Trp Ile Gln Val Asn Leu Leu Arg Lys Met Arg Val Ser Gly Val			
145	150	155	160

Met Thr Gln Gly Ala Ser Arg Ala Gly Arg Ala Glu Tyr Leu Lys Thr  
165 170 175

Phe Lys Val Ala Tyr Ser Leu Asp Gly Arg Lys Phe Glu Phe Ile Gln  
180 185 190

Asp Glu Ser Gly Gly Asp Lys Glu Phe Leu Gly Asn Leu Asp Asn Asn  
195 200 205

Ser Leu Lys Val Asn Met Phe Asn Pro Thr Leu Glu Ala Gln Tyr Ile  
210 215 220

Arg Leu Tyr Pro Val Ser Cys His Arg Gly Cys Thr Leu Arg Phe Glu  
225 230 235 240

Leu Leu Gly Cys

<210> 5  
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<223> ECC - recombinant protein

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Glu Thr Glu Arg Gly Pro Cys Ser Pro Asn Pro Cys Tyr Asn Asp Ala  
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Lys Cys Leu Val Thr Leu Asp Thr Gln Arg Gly Asp Ile Phe Thr Glu  
20 25 30

Tyr Ile Cys Gln Cys Pro Val Gly Tyr Ser Gly Ile His Cys Glu Thr  
35 40 45

Gly Cys Ser Thr Gln Leu Gly Met Glu Gly Gly Ala Ile Ala Asp Ser  
50 55 60

Gln Ile Ser Ala Ser Ser Val Tyr Met Gly Phe Met Gly Leu Gln Arg  
65 70 75 80

Trp Gly Pro Glu Leu Ala Arg Leu Tyr Arg Thr Gly Ile Val Asn Ala  
85 90 95

Trp Thr Ala Ser Asn Tyr Asp Ser Lys Pro Trp Ile Gln Val Asn Leu  
100 105 110

Leu Arg Lys Met Arg Val Ser Gly Val Met Thr Gln Gly Ala Ser Arg  
115 120 125

Ala Gly Arg Ala Glu Tyr Leu Lys Thr Phe Lys Val Ala Tyr Ser Leu  
130 135 140

Asp Gly Arg Lys Phe Glu Phe Ile Gln Asp Glu Ser Gly Gly Asp Lys  
145 150 155 160

Glu Phe Leu Gly Asn Leu Asp Asn Asn Ser Leu Lys Val Asn Met Phe  
165 170 175

Asn Pro Thr Leu Glu Ala Gln Tyr Ile Arg Leu Tyr Pro Val Ser Cys  
180 185 190

His Arg Gly Cys Thr Leu Arg Phe Glu Leu Leu Gly Cys Glu Leu His  
195 200 205

Gly Cys Ser Glu Pro Leu Gly Leu Lys Asn Asn Thr Ile Pro Asp Ser  
210 215 220

Gln Met Ser Ala Ser Ser Ser Tyr Lys Thr Trp Asn Leu Arg Ala Phe  
225 230 235 240

Gly Trp Tyr Pro His Leu Gly Arg Leu Asp Asn Gln Gly Lys Ile Asn  
245 250 255

Ala Trp Thr Ala Gln Ser Asn Ser Ala Lys Glu Trp Leu Gln Val Asp  
260 265 270

Leu Gly Thr Gln Arg Gln Val Thr Gly Ile Ile Thr Gln Gly Ala Arg  
275 280 285

Asp Phe Gly His Ile Gln Tyr Val Ala Ser Tyr Lys Val Ala His Ser  
290 295 300

Asp Asp Gly Val Gln Trp Thr Val Tyr Glu Glu Gln Gly Ser Ser Lys  
305 310 315 320

Val Phe Gln Gly Asn Leu Asp Asn Asn Ser His Lys Lys Asn Ile Phe  
325 330 335

Glu Lys Pro Phe Met Ala Arg Tyr Val Arg Val Leu Pro Val Ser Trp  
340 345 350

His Asn Arg Ile Thr Leu Arg Leu Glu Leu Leu Gly Cys  
355 360 365

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<223> EC - recombinant protein

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Glu Thr Glu Arg Gly Pro Cys Ser Pro Asn Pro Cys Tyr Asn Asp Ala  
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Lys Cys Leu Val Thr Leu Asp Thr Gln Arg Gly Asp Ile Phe Thr Glu  
20 25 30

Tyr Ile Cys Gln Cys Pro Val Gly Tyr Ser Gly Ile His Cys Glu Thr  
35 40 45

Gly Cys Ser Thr Gln Leu Gly Met Glu Gly Gly Ala Ile Ala Asp Ser  
50 55 60

Gln Ile Ser Ala Ser Ser Val Tyr Met Gly Phe Met Gly Leu Gln Arg  
65 70 75 80

Trp Gly Pro Glu Leu Ala Arg Leu Tyr Arg Thr Gly Ile Val Asn Ala  
85 90 95

Trp Thr Ala Ser Asn Tyr Asp Ser Lys Pro Trp Ile Gln Val Asn Leu  
100 105 110

Leu Arg Lys Met Arg Val Ser Gly Val Met Thr Gln Gly Ala Ser Arg  
115 120 125

Ala Gly Arg Ala Glu Tyr Leu Lys Thr Phe Lys Val Ala Tyr Ser Leu  
130 135 140

Asp Gly Arg Lys Phe Glu Phe Ile Gln Asp Glu Ser Gly Gly Asp Lys  
145 150 155 160

Glu Phe Leu Gly Asn Leu Asp Asn Asn Ser Leu Lys Val Asn Met Phe  
165 170 175

Asn Pro Thr Leu Glu Ala Gln Tyr Ile Arg Leu Tyr Pro Val Ser Cys  
180 185 190

His Arg Gly Cys Thr Leu Arg Phe Glu Leu Leu Gly Cys  
195 200 205

<210> 7  
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<212> PRT  
<213> artificial

<220>  
<223> CC - recombinant protein

<400> 7

Gly Cys Ser Thr Gln Leu Gly Met Glu Gly Gly Ala Ile Ala Asp Ser  
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Gln Ile Ser Ala Ser Ser Val Tyr Met Gly Phe Met Gly Leu Gln Arg  
20 25 30

Trp Gly Pro Glu Leu Ala Arg Leu Tyr Arg Thr Gly Ile Val Asn Ala  
35 40 45

Trp Thr Ala Ser Asn Tyr Asp Ser Lys Pro Trp Ile Gln Val Asn Leu  
50 55 60

Leu Arg Lys Met Arg Val Ser Gly Val Met Thr Gln Gly Ala Ser Arg  
65 70 75 80

Ala Gly Arg Ala Glu Tyr Leu Lys Thr Phe Lys Val Ala Tyr Ser Leu  
85 90 95

Asp Gly Arg Lys Phe Glu Phe Ile Gln Asp Glu Ser Gly Gly Asp Lys  
100 105 110

Glu Phe Leu Gly Asn Leu Asp Asn Asn Ser Leu Lys Val Asn Met Phe  
115 120 125

Asn Pro Thr Leu Glu Ala Gln Tyr Ile Arg Leu Tyr Pro Val Ser Cys  
130 135 140

His Arg Gly Cys Thr Leu Arg Phe Glu Leu Leu Gly Cys Glu Leu His  
145 150 155 160

Gly Cys Ser Glu Pro Leu Gly Leu Lys Asn Asn Thr Ile Pro Asp Ser  
165 170 175

Gln Met Ser Ala Ser Ser Ser Tyr Lys Thr Trp Asn Leu Arg Ala Phe  
180 185 190

Gly Trp Tyr Pro His Leu Gly Arg Leu Asp Asn Gln Gly Lys Ile Asn  
195 200 205

Ala Trp Thr Ala Gln Ser Asn Ser Ala Lys Glu Trp Leu Gln Val Asp  
210 215 220

Leu Gly Thr Gln Arg Gln Val Thr Gly Ile Ile Thr Gln Gly Ala Arg  
225 230 235 240

Asp Phe Gly His Ile Gln Tyr Val Ala Ser Tyr Lys Val Ala His Ser  
245 250 255

Asp Asp Gly Val Gln Trp Thr Val Tyr Glu Glu Gln Gly Ser Ser Lys  
260 265 270

Val Phe Gln Gly Asn Leu Asp Asn Asn Ser His Lys Lys Asn Ile Phe  
275 280 285

Glu Lys Pro Phe Met Ala Arg Tyr Val Arg Val Leu Pro Val Ser Trp  
290 295 300

His Asn Arg Ile Thr Leu Arg Leu Glu Leu Leu Gly Cys  
305 310 315

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<223> primer sequence

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<223> primer sequence

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26